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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

FULLER, BRYAN A

ART UNIT	PAPER NUMBER
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3676

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/681,976

Applicant(s)

POWELL ET AL.

Examiner

Bryan A. Fuller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) 24-44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23, 45-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-46 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2004 & 10/9/03
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1 – 23 & 45 - 46, drawn to a method of treating a subterranean formation penetrated by a well, classified in class 166, subclass 300.
 - II. Claims 24 - 44, drawn to a treatment fluid for treating a subterranean formation, classified in class 507, subclass 203.
2. The inventions are distinct, each from the other because:
3. Inventions II and I are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product can be used in other well treatment processes such as consolidating.
4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
5. During a telephone conversation with Robert Kent on 9/15/2005 a provisional election was made with out traverse to prosecute the invention of Group I claims 1 – 23 & 45 - 46. Affirmation of this election must be made by applicant in replying to this Office action. Claims 24 - 44 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Specification

6. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1 – 3, 5, 13, 16, 22, and 45 – 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Weaver et al (6,488,091).

With respect to claims 1, 2, 45, and 46: Weaver et al teaches in column 3, lines 7 – 61, column 4, lines 30 – 64, column 7, lines 27 – 59, and in column 9, lines 1 – 31 a method of treating a subterranean formation penetrated by a well, the method comprising the steps of:

(a) forming a treatment fluid, comprising:

- 1) water;
- 2) a water-soluble polysaccharide and a crosslinking agent for the water-soluble polysaccharide, which are present in a sufficient concentration to effect crosslinking of the of the polysaccharide and increase the viscosity of the water; a breaker comprising at least one member selected from the group consisting of a source of chlorite ions and a source of hypochlorite ions, wherein the breaker is present in a sufficient concentration to break the viscosity of the treatment fluid after introduction of the fluid into the subterranean formation; and
- 4) a breaker moderator or modifier comprising at least one member selected from the group consisting of a source of magnesium ions and a source of calcium ions, wherein the breaker moderator is present in a sufficient concentration of at least about 15/mg/L to control the break rate of the fluid; and

(b) introducing the treatment fluid into the well and into contact with the formation. Weaver et al does not call the compound used to control the break rate of the fluid a moderator. Weaver et al uses the term delinker for the compound that performs the same function and is made up of the same compounds as the moderator. This explanation is also extended to the term modifier used in claim 46.

With respect to claims 3 and 4: Weaver et al teaches in column 7, lines 33 – 38 a method wherein the formation has a static temperature of 200°F and above.

With respect to claims 5 - 7: Weaver et al teaches in column 3, lines 39 – 61 a method wherein the step of introducing the treatment fluid into the well and into contact with the formation is at a rate and pressure sufficient to fracture the formation and the treatment fluid further comprises a proppant.

With respect to claim 8: Weaver et al teaches all of the features as previously claimed. Weaver et al does not expressly teach a method wherein the treatment fluid is adapted to break within 1 to 24 hours after being introduced into the well and into contact with the formation. This is an inherent quality of this treatment fluid because it contains the same compositions under the same conditions.

With respect to claims 9 and 10: Weaver et al teaches in column 5, lines 32 – 39 a method wherein the polysaccharide comprises at least one member selected from the group consisting of galactomannans, modified or derivatized galactomannans, and cellulose derivatives. Additionally, Weaver et al teaches a method wherein the polysaccharide comprises at least one member selected from the group consisting of guar, hydroxypropylguar, carboxymethylhydroxypropylguar, carboxymethylhydroxyethylcellulose, carboxymethylcellulose, and hydroxyethylcellulose grafted with vinylphosphonic acid.

With respect to claims 11 and 12: Weaver et al teaches in column 8, lines 33 – 52 a method wherein the crosslinking agent comprises at least one member selected from the group consisting of borate-releasing compounds, a source of titanium ions, a source of zirconium ions, a source of antimony ions, and a source aluminum ions.

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Additionally, Weaver et al teaches a method wherein the borate-releasing compound comprises ulexite.

With respect to claims 13 - 15: Weaver et al teaches in column 9, lines 18 – 23 a method wherein the breaker comprises sodium chlorite.

With respect to claims 16 - 18: Weaver et al teaches in column 9, lines 18 – 23 a method wherein the breaker moderator comprises at least one member selected from the group consisting of a source of magnesium ions.

With respect to claims 22 and 23: Weaver et al teaches in column 4, lines 8 – 12 and in column 8, line 1 – column 9, line 9 a method wherein the fluid further comprises a pH adjusting agent present in a sufficient concentration to adjust the pH of the fluid to be at least 10.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 19 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weaver et al in view of Dawson et al (US 2002/0125012).

With respect to claim 19: Weaver et al teaches the features as previously claimed except for wherein the breaker moderator comprises at least one member selected from the group consisting of magnesium chloride, magnesium acetate, and

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magnesium sulfate. Dawson et al teaches in paragraph [0019] a method wherein the breaker moderator comprises at least one member selected from the group consisting of magnesium chloride, magnesium acetate, and magnesium sulfate. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Weaver et al's invention in view of Dawson et al, because this allows for the fluid to exhibit reduced or minimal premature breaking and breaks completely or substantially completely after a well treatment is finished.

With respect to claims 20 and 21: Weaver et al teaches the features as previously claimed except for wherein the breaker moderator comprises at least one member selected from the group consisting of: calcium chloride, calcium acetate, and calcium nitrate. Dawson et al teaches in paragraph [0019] a method wherein the breaker moderator comprises at least one member selected from the group consisting of: calcium chloride, calcium acetate, and calcium nitrate. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Weaver et al's invention in view of Dawson et al, because this allows for the fluid to exhibit reduced or minimal premature breaking and breaks completely or substantially completely after a well treatment is finished.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan A. Fuller whose telephone number is (571) 272-

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8119. The examiner can normally be reached on M - Th 7:30 - 5:00 and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian E. Glessner can be reached on (571) 272-6843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brian E. Glessner
Supervisory Patent Examiner
Art Unit 3676

baf